

# OFFICIAL BULLETIN #17



TO: All Unit Heads  
FROM: Darren Hess, Facilities Director  
SUBJECT: FWCS Energy Leadership Program Standards  
DATE: July 27, 2017

In line with District goals, the Energy Leadership Program will enable Fort Wayne Community Schools (FWCS) to achieve and maintain academic excellence through improving the physical classroom environment by creating improved indoor air quality, lighting, temperature, humidity and proper ventilation in our students' classrooms. This Energy Leadership Program aims to educate not only FWCS employees but all users of FWCS buildings including custodians, outside community partners and students. In addition to optimizing the learning environment and educating our users, FWCS will save energy dollars that can ultimately be put back into the classroom.

Numerous studies show a strong correlation between proper learning environment conditions and student performance and behavior. The attached Energy Leadership Program Standards were developed to conserve energy, reduce utility costs and enhance the learning environment in our schools.

Below are excerpts from the Energy Leadership Program Standards that apply to all employees. Questions or concerns should be referred to the Coordinator of Energy Management at 467-2523.

## **Equipment Operation and Building Use**

- All office and instructional equipment, except fax machines, network copiers and network switches, should be turned off at the end of each day by the faculty and staff before they leave. This includes computers, individual printers, monitors, speakers, projectors, interactive white boards, etc.
- Shut down all District computers on Monday, Tuesday, Thursday and Friday. On Wednesday, "restart" each computer at the end of the day.
- Appliances, other than those operated by Nutrition Services, should be limited to staff lounges and break areas. Individual appliances such as refrigerators, microwaves, coffee makers, etc. in the classrooms and offices not only use a large amount of energy, but often present indoor air quality issues, sanitation issues, pest management issues and safety issues.
- All ceiling-mounted and floor fans shall be turned off at the end of the day.

## **Lighting System Operation**

- Lights should only be turned on when truly needed.
- All lighting shall be turned off in unoccupied areas. Staff shall turn lights off whenever they are leaving an unoccupied classroom, office or multiuse area.
- The operation of gym lights should get specific attention based on the type and design of each particular gym's lighting system. Operation times and levels should be specifically selected for the type of gym use.
- All lights should be turned off when the students and staff leave for the day. Custodians shall operate lights only in the areas in which they are working.
- Parking lot lights should only operate when it is dark outside and when use of the parking area is expected. Building wall mounted lights or security lights shall be the primary source of outside lighting during the night.

It is expected that all District employees will support the Energy Leadership Program recognizing the District's efforts to reduce utility costs through energy conservation and education initiatives prescribed within the program. District employees are encouraged to seek additional energy conservation opportunities and share their own energy conservation ideas by reporting them to the Coordinator of Energy Management at 467-2523 or by emailing them to **[energyideas@fwcs.k12.in.us](mailto:energyideas@fwcs.k12.in.us)**.



## Energy Leadership Program Standards

In line with District goals, the Energy Leadership Program will enable Fort Wayne Community Schools (FWCS) to achieve and maintain academic excellence through improving the physical classroom environment by creating improved indoor air quality, lighting, temperature, humidity and proper ventilation in our students' classrooms. This Energy Leadership Program aims to educate not only FWCS employees but also all users of FWCS buildings including custodians, outside community partners and students. In addition to optimizing the learning environment and educating our users, FWCS will save energy dollars which can ultimately be put back into the classroom.

Numerous studies show a strong correlation between proper learning environment conditions and student performance and behavior. The following standards were developed to conserve energy, reduce utility costs and enhance the learning environment in our schools.

### Duties:

- The Coordinator of Energy Management develops and directs the Energy Leadership Program with the objective of significantly reducing energy consumption while maintaining an optimal learning environment and positive stakeholder relationships.
- The Coordinator of Energy Management will accurately track the energy use within the district on a building-by-building basis and regularly report the results of the program to the Business Office and the Board of School Trustees.
- The Coordinator of Energy Management and the Compliance Auditor will perform regular building audits during occupied and unoccupied times ensuring program compliance and investigating additional energy conservation opportunities. The results of each audit will be shared with the Business Office and the building's Unit Head.
- It is expected that all District employees will support the Energy Leadership Program recognizing the District's efforts to reduce utility costs through energy conservation and education initiatives prescribed within the program. District employees are encouraged to seek additional energy conservation opportunities and share their own energy conservation ideas by reporting them to the Coordinator of Energy Management at 467-2523 or by emailing them to [energyideas@fwcs.k12.in.us](mailto:energyideas@fwcs.k12.in.us)
- Unit Heads will assist the Coordinator of Energy Management to ensure compliance of the District's energy conservation initiatives within their facility.
- The District's custodial vendor and the District's Maintenance and Operations staff will be responsible for the implementation of proper maintenance procedures involving HVAC equipment, lighting systems and other indoor air quality related systems.

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- The District's custodial vendor and District's Maintenance and Operations staff will assist the Coordinator of Energy Management with verifying compliance and, in some cases, carrying out the buildings' occupied HVAC schedules.

#### HVAC System Operation:

- Optimal learning environment set points will be utilized whenever the building or space is occupied by students.
- Target set points are as follows:
  - Cooling Season Occupied: 74 degrees**
  - Cooling Season Unoccupied: 80 degrees**
  - Heating Season Occupied: 70 degrees**
  - Heating Season Unoccupied: 62 degrees**
  - Relative Humidity: 50-60%**
  - CO2 Levels: Less than 1000ppm**
- When mechanical cooling is in operation, the occupied temperature setting shall be 74 degrees and the unoccupied temperature setting shall be 80 degrees.
- All ventilation dampers shall be kept in the closed position or if the system is an independent ventilation system it shall remain off, during unoccupied operation and during all unoccupied times.
- When the mechanical heating system is in operation, the occupied temperature setting shall be 70 degrees and the unoccupied temperature setting shall be 62 degrees. All ventilation systems and controls shall be shut down during unoccupied operation.
- A building, or area of a building, is considered "occupied" when there are students present for instruction and during teacher contracted work days. Therefore, the systems should go into unoccupied operation as soon as the students leave each day. It is assumed that the temperature in the classroom will be maintained long enough for the staff to complete their day.
- The use of portable space heaters in classrooms is not allowed.
- All interior and exterior doors shall remain closed when the HVAC system is in occupied operation. Many doors separate conditioned spaces from unconditioned spaces and if the doors are kept open, the effectiveness of the HVAC system serving the conditioned space will be significantly reduced.
- Maintain a 24" clearance in front of all classroom unit ventilators and keep the top of the unit clear.
- Classroom unit ventilators should not be turned off except in an emergency. If a problem is perceived, the building engineer should be notified immediately. Ventilation of the classroom is mandatory to maintain acceptable CO2 levels in the space.

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- The building should be placed into occupied mode no more than 15 minutes prior to the arrival of students. During times of extreme outside conditions, the morning warm-up or cool-down modes shall be utilized if the system is equipped to do so. Proper warm-up and cool-down modes allow for the systems to start heating or cooling the building to the occupied set-point even though the system is still in unoccupied operation (i.e., ventilation systems are closed or off).
- During the summer break when instruction will not be taking place in the schools and where the office has standalone cooling systems available, all central chillers and associated pumps will be shut down and turned off via manual disconnect switch and building automation system overrides.
- Events requiring a facility, or area of a facility, to operate outside of the normal occupied times should be properly scheduled. Click on this link for instructions: [After Hours Event HVAC Scheduling Information](#). An administrator or the building custodial-engineer or foreman shall notify the Energy Management team of any changes or additions to the schedule via the web link. **This notice shall be at least 48 hours in advance of the event and shall include the event date, time, facility and location within the facility. Any request with less than 48 hour notice must be called in to Maintenance & Operations (72470) or Energy Management (72523).**
- Where possible, domestic hot water recirculating pumps shall be scheduled to operate only when the custodial staff is present and working in the building.
- Exhaust fans shall only operate during occupied times with the exception of restrooms which will operate 24/7.

#### Lighting System Operation:

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- All lights should be turned off when the students and staff leave for the day. Custodians shall operate lights only in the areas in which they are working.
- Parking lot lights should only operate when it is dark outside and when use of the parking area is expected. Building wall mounted lights or security lights shall be the primary source of outside lighting during the night.

**Equipment Operation and Building Use:**

- All office and instructional equipment, except for fax machines, network copiers and network switches, should be turned off at the end of each day by the faculty and staff before they leave. This includes computers, individual printers, monitors, speakers, projectors, interactive white boards, etc.
- Shut down all District computers on Monday, Tuesday, Thursday and Friday. On Wednesday, “restart” each computer at the end of the day.
- All capable equipment should be set to utilize its energy saver mode.
- Appliances, other than those operated by Nutrition Services, should be limited to staff lounges and break areas. Individual appliances such as refrigerators, microwaves, coffee makers, etc. in the classrooms and offices not only use a large amount of energy, but often present indoor air quality issues, sanitation issues, pest management issues and safety issues.
- When replacing equipment, “energy star” rated equipment should be purchased.
- All ceiling-mounted and floor fans shall be turned off at the end of the day.